平成 30 年度第 2 回 VBL セミナー
2nd VBL Seminar, 2018

日時：平成 30 年 7 月 31 日（火）16 時 00 分～17 時 30 分
場所：ITbM 1 階 レクチャールーム
講師：Jerome Lacour 教授（University of Geneva, スイス）
（VBL 客員教授）
題目: From Cationic Helical Derivatives to Metal-Free and Metal-Bound Ylide Chemistry

要旨: Carbenes are electrically neutral low-valent forms of carbon that are highly reactive when substituted with strong electron-withdrawing groups. These electrophilic species react well with Lewis bases to generate ylide intermediates. We demonstrated the chemical structure and reactivity of oxonium, ammonium, and carbonyl ylides.[1–4] A large array of original transformations and structures are generated in a single step. Triaryl-substituted carbenium ions (carbocations) are important building blocks, readily prepared from simple precursors and presenting a large panel of tunable geometrical, chemical and physical properties. We developed short and highly modular syntheses and the use of functionalized triangulenes, [4]helicenes, and [6]helicenes.[5–10] In particular, the helicene derivatives present helical geometries with very high barriers of racemization between enantiomers. The chemical, (chir)optical, and photophysical properties are characterized and applied to questions in chemistry, biology, and physics.

References

(1) *Angew. Chem., Int. Ed.* **2016**, *55*, 13775. (2) *Synthesis* **2016**, *48*, 3254. (3) *ACS Catal.* **2016**, *6*, 4877. (4) *Org. Lett.* **2016**, *18*, 240. (5) *Chem. Eur. J.* **2016**, *22*, 18394. (6) *Org. Biomol. Chem.* **2016**, *14*, 4590. (7) *Chem. Sci.* **2016**, *7*, 4685. (8) *J. Am. Chem. Soc.* **2016**, *138*, 1752. (9) *Adv. Mater.* **2016**, *28*, 1957. (10) *Chem. Eur. J.* **2015**, *21*, 19243.

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